



INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/CH2004/000148

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
    - ☐ international search (Rule 12.3 and 23.1(b))
    - ☐ publication of the international application (Rule 12.4)
    - ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
  - ☐ the international application as originally filed/furnished
  - ☒ the description:
    - pages 1-7 \_\_\_\_\_ as originally filed/furnished
    - pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
    - pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
  - ☒ the claims:
    - nos. \_\_\_\_\_ as originally filed/furnished
    - nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
    - nos.\* 1-14 received by this Authority on 04.10.2004 with the letter of 01.04.2004
    - nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
  - ☒ the drawings:
    - sheets 1/5-5/5 \_\_\_\_\_ as originally filed/furnished
    - sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
    - sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
  - ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
  - ☐ the description, pages \_\_\_\_\_
  - ☐ the claims, nos. \_\_\_\_\_
  - ☐ the drawings, sheets/figs \_\_\_\_\_
  - ☐ the sequence listing (*specify*): \_\_\_\_\_
  - ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
  - ☐ the description, pages \_\_\_\_\_
  - ☐ the claims, nos. \_\_\_\_\_
  - ☐ the drawings, sheets/figs \_\_\_\_\_
  - ☐ the sequence listing (*specify*): \_\_\_\_\_
  - ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	1-14	YES
	Claims		NO
Inventive step (IS)	Claims	1-14	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-14	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

Reference is made to the following document:

D1: PATENT ABSTRACTS OF JAPAN, Vol. 2000, No. 26,  
1 July 2002 -&JP 2001 239357 A (AISIN SEIKI  
CO LTD), 4 September 2001 (2001-09-04)

1.)

Novelty:

Document D1 is considered the prior art closest to the subject matter of claim 1 and discloses a holding furnace for molten metal, more particularly for light molten metal, comprising a dosing chamber that has a sealable discharge aperture which opens out into a feed tube, via which the molten metal can be supplied in a dosed manner to the place of use and it being possible to actively seal the discharge aperture by means of a stopper rod.

The subject matter of independent claim 1 **differs** from the prior art in that the dosing chamber (8) with the delivery pipe (21) is rotatably and

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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tiltably mounted in the holding furnace (1).

Novelty pursuant to PCT Article 33(2) is thus established.

2.)

Inventive step:

The features which distinguish the application from the available prior art have the **effect** of making it possible to better adapt to the geometric ratios of the casting chamber to be filled and that by means of a small tilting movement it is possible to decouple the dosing unit from the casting chamber, which is subject to heavy vibration.

It is not possible for the applicant to derive the claimed device from the prior art and therefore an inventive step (PCT Article 33(3)) can be acknowledged in respect of claim 1.

3.)

Dependent claims:

Claims 2-13 and 14\* are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step.

\* see Box VIII a.)

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	<p>4.)</p> <p><u>Industrial applicability:</u></p> <p>Since the method and the device can be used to handle melts in the foundry industry, the invention is industrially applicable.</p>

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**Box No. VII**      **Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

a.)

Contrary to PCT Rule 5.1(a)(ii), the description does not cite document D1 or indicate the relevant prior art disclosed therein.

b.)

Pursuant to PCT Rule 11.13(m), the same feature must be denoted by the same reference sign throughout the application. This requirement is not satisfied by the use of reference sign (8) (see figures 1 and 2).

c.)

Contrary to PCT Rule 5.1(a)(iii), the description is inconsistent with the claims.

**Box No. VIII** Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

The application does not meet the requirements of PCT Article 6 because claims 1-14 are unclear.

a.)

Claim 14 is not clear. As currently worded, claim 14 is an independent claim. In the light of the description, however, it can be seen that it actually concerns a holding furnace according to claims 1 to 13, with a dosing device which is characterised in that the melt conversion is isolated following the join (23) by means of a ceramic sleeve (41) which is inserted into the casting chamber inside a wear protection sleeve (42).

b.)

The use of the definite article leads the reader to assume that the feature has already been mentioned in the preceding claims. This is not, however, the case for the following features and claims, which therefore contravene PCT Article 6; see:

claim 1: **the** delivery pipe (21)

claim 2: **the** gas-tight and...drive

claim 3: **the** scanning electrodes

claim 4: refers, *inter alia*, to claim 1, which mentions neither scanning electrodes nor a bellows

claim 9: **the** concentric arrangement of the rotary

## Box No. VIII Certain observations on the international application

arm.

c.)

The features in claims 5, 6, 7, 11 and 12 relate to a method instead of describing clear restrictions for the device. The requirements of PCT Article 6 are therefore not satisfied.

d.)

Known features should be indicated in the preamble and new features in the characterising part. This is not the case in claim 1, which therefore contravenes PCT Article 6.